CLAIMS:

1. A method of forming integrated circuitry, comprising:

chemical vapor depositing a silicon carbide comprising layer over a substrate at a temperature of no greater than 500°C; and

plasma etching through at least a portion of the silicon carbide comprising layer using a gas chemistry comprising oxygen and hydrogen.

2. The method of claim 1 comprising conducting the chemical vapor depositing at a temperature of no greater than 200°C.

3. The method of claim 1 wherein the substrate is not exposed to a temperature greater than 500°C between the depositing and the etching.

4. The method of claim 1 wherein the substrate is not exposed to a temperature greater than the highest temperature during the depositing between the depositing and the etching.

5. The method of claim 1 wherein the chemical vapor depositing is plasma enhanced.

6. The method of claim 1 wherein the oxygen is derived from the group consisting of O_2, O_3, NO_x, CO, CO_2, and mixtures thereof.

7. The method of claim 1 wherein the hydrogen is derived from the group consisting of H_2, NH_3, CH_4, and mixtures thereof.

8. The method of claim 1 wherein,

the oxygen is derived from the group consisting of O_2, O_3, NO_x, CO, CO_2, and mixtures thereof; and

the hydrogen is derived from the group consisting of H_2, NH_3, CH_4, and mixtures thereof.

9. The method of claim 1 wherein the oxygen is derived at least in part from O_2 and the hydrogen is derived at least in part from NH_3.

10. The method of claim 1 wherein the plasma etching is conducted within a chamber, plasma during the plasma etching being first formed within the chamber.

11. The method of claim 1 wherein the plasma etching is conducted within a chamber, plasma during the plasma etching being first formed remote from the chamber.

12. A semiconductor processing method, comprising:

chemical vapor depositing a silicon carbide comprising layer over a semiconductor substrate at a temperature of no greater than 500°C;

forming an insulative material over the silicon carbide comprising layer;

etching a contact opening into the insulative material to proximate the silicon carbide comprising layer; and

plasma etching within the contact opening through the silicon carbide comprising layer using a gas chemistry comprising oxygen and hydrogen to extend the contact opening through the silicon carbide comprising layer and under conditions which etches the silicon carbide comprising layer at a rate at least twice that of any etching of the insulative material.

13. The method of claim 12 comprising plasma etching under conditions which etches the silicon carbide comprising layer at a rate at least three times that of any etching of the insulative material.

14. The method of claim 12 comprising plasma etching under conditions which etches the silicon carbide comprising layer at a rate at least four times that of any etching of the insulative material.

15. The method of claim 12 wherein the etching to proximate the silicon carbide comprising layer exposes the silicon carbide comprising layer, and using the silicon carbide comprising layer as an etch stop during said etching to proximate the silicon carbide comprising layer.

16. The method of claim 12 comprising conducting the chemical vapor depositing at a temperature of no greater than 200°C.

17. The method of claim 12 wherein the substrate is not exposed to a temperature greater than 500°C between the depositing and the etching.

18. The method of claim 12 wherein the substrate is not exposed to a temperature greater than the highest temperature during the depositing between the depositing and the etching.

19. The method of claim 12 comprising conducting the chemical vapor depositing at a temperature of no greater than 250°C, and wherein the substrate is not exposed to a temperature greater than 250°C between the depositing and the etching.

20. The method of claim 12 wherein the oxygen is derived from the group consisting of O_2, O_3, NO_x, CO, CO_2, and mixtures thereof.

21. The method of claim 12 wherein the hydrogen is derived from the group consisting of H_2, NH_3, CH_4, and mixtures thereof.

22. The method of claim 12 wherein the oxygen is derived at least in part from O_2 and the hydrogen is derived at least in part from NH_3.

23. The method of claim 12 wherein the plasma etching is conducted within a chamber, plasma during the plasma etching being first formed within the chamber.

24. The method of claim 12 comprising after the plasma etching, forming conductive material within the contact opening.

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25. A process of forming MRAM circuitry, comprising:

forming an MRAM cell comprising magnetic material over a substrate;

chemical vapor depositing a silicon carbide comprising layer over the MRAM cell at a temperature of no greater than 500°C;

forming an insulative material over the silicon carbide comprising layer;

etching a contact opening through the insulative material using the silicon carbide comprising layer as an etch stop; and

plasma etching within the contact opening through the silicon carbide comprising layer using a gas chemistry comprising oxygen and hydrogen to extend the contact opening through the silicon carbide comprising layer to the magnetic material of the MRAM cell, and under conditions which etches the silicon carbide comprising layer at a rate at least twice that of any etching of the insulative material.

26. The method of claim 25 wherein the MRAM cell comprises a ~~dielectric~~ layer sandwiched between magnetic material layers.
non-magnetic
AT 1-8-02 MFH 1/8/02 L 1/8/02

27. The method of claim 25 wherein the insulative material comprises SiO_2.

28. The method of claim 25 comprising conducting the chemical vapor depositing at a temperature of no greater than 200°C.

29. The method of claim 25 wherein the substrate is not exposed to a temperature greater than 500°C between the depositing and the etching.

30. The method of claim 25 wherein the substrate is not exposed to a temperature greater than the highest temperature during the depositing between the depositing and the etching.

31. The method of claim 25 comprising conducting the chemical vapor depositing at a temperature of no greater than 250°C, and wherein the substrate is not exposed to a temperature greater than 250°C between the depositing and the etching.

32. The method of claim 25 wherein the oxygen is derived from the group consisting of O_2, O_3, NO_x, CO, CO_2, and mixtures thereof.

33. The method of claim 25 wherein the hydrogen is derived from the group consisting of H_2, NH_3, CH_4, and mixtures thereof.

34. The method of claim 25 wherein the plasma etching is conducted within a chamber, plasma during the plasma etching being first formed within the chamber.

35. The method of claim 25 comprising after the plasma etching, forming conductive material within the contact opening.

36. A semiconductor processing method, comprising:

chemical vapor depositing a silicon carbide comprising layer over a semiconductor substrate at a temperature of no greater than 500°C;

forming an insulative material over the silicon carbide comprising layer;

forming resist over the insulative material;

forming a mask opening within the resist to proximate the insulative layer;

etching a contact opening into the insulative material through the mask opening to proximate the silicon carbide comprising layer; and

in a common etching step and with the resist on the substrate, a) plasma etching within the contact opening through the silicon carbide comprising layer using a gas chemistry comprising oxygen and hydrogen to extend the contact opening through the silicon carbide comprising layer and under conditions which etch the silicon carbide comprising layer at a rate at least twice that of any etching of the insulative material, and b) plasma etching all resist from the substrate.

37. The method of claim 36 wherein the insulative material comprises SiO_2.

38. The method of claim 36 wherein the etching to proximate the silicon carbide comprising layer exposes the silicon carbide comprising layer, and using the silicon carbide comprising layer as an etch stop during said etching to proximate the silicon carbide comprising layer.

39. The method of claim 36 comprising conducting the chemical vapor depositing at a temperature of no greater than 200°C.

40. The method of claim 36 wherein the substrate is not exposed to a temperature greater than 500°C between the depositing and the etching.

41. The method of claim 36 wherein the substrate is not exposed to a temperature greater than the highest temperature during the depositing between the depositing and the etching.

42. The method of claim 36 comprising conducting the chemical vapor depositing at a temperature of no greater than 250°C, and wherein the substrate is not exposed to a temperature greater than 250°C between the depositing and the etching.

43. The method of claim 36 wherein the oxygen is derived from the group consisting of O_2, O_3, NO_x, CO, CO_2, and mixtures thereof.

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44. The method of claim 36 wherein the hydrogen is derived from the group consisting of H_2, NH_3, CH_4, and mixtures thereof.

45. The method of claim 36 wherein the plasma etching is conducted within a chamber, plasma during the plasma etching being first formed within the chamber.

46. The method of claim 36 comprising after the plasma etching, forming conductive material within the contact opening.

47. The method of claim 36 wherein the resist comprises photoresist.